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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/672,953  
Filing Date: September 26, 2003  
Appellant(s): ZHANG ET AL.

Philip S. Lyren  
Registration No. 40,709  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/02/2009  
appealing from the Office action mailed 05/29/2009.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

7,906,197	Messmer et al.	08-2006
2002/0174052	Guler et al.	11-2002
6,061,662	Makivic	05-2000

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on Supreme Court precedent, a method/process claim must (1) be tied to another statutory class of invention (such as a particular apparatus) (see at least *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972)). A method/process claim that fails to meet one of the

above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. . Here the claims fails to meet the above requirements because the steps are neither tied to another statutory class of invention (such as a particular apparatus) nor physically transform underlying subject matter (such as an article or materials) to a different state or thing.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Examiner views the recitation, of "a computer" in the amended claim 1, as new matter since it is not found within the text of the original specification.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4-8, 10-15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Messmer et al. U.S. Patent Number 7,096,197 B2 (PTO-892 Reference A) in view of Makivic U.S. Patent Number 6,061,662 (PTO-892 Reference C).

7. As per claim 1, Messmer teaches a method, comprising:  
obtaining historical auction data (Col. 10 Lns. 1-5);  
selecting a bidder; obtaining a value distribution for the selected bidder (Col. 9 Lns 39-50); and

However Messmer does not explicitly disclose;  
determining, from the historical auction data, a first parameter that is a function of a joint bid distribution and a density function related to the joint bid distribution or solving an equation that includes the first parameter and the selected bidder's value distribution, and not the value

distribution of other bidders, to compute a bid value associated with the selected bidder for a given bid.

Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Makivic further discloses deriving a price sensitivity parameter and solving a simulation to compute an option price (Makivic Col 25 Lns. 4-15). It would have been obvious for one of ordinary skill in the arts to apply combine these two disclosers in this way for the purpose of performing online, network-based quantitative analysis and derivative valuation for market participants (Makivic Col 2 Lns. 59-62).

8. As per claim 2, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches solving the equation comprises solving an ordinary differential equation that comprises a probability value distribution associated with the selected bidder and the derivative of the probability value distribution (see Makivic Col. 10 Lns. 11-30).

9. As per claim 4, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches determining a first parameter comprises computing a ratio of the density function to the joint bid distribution (Makivic Col. 28 Ln. 33-40).

10. As per claim 5, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches repeating the acts of selecting a bidder, obtaining a probability value distribution for the selected bidder and solving the equation for additional bidders (Col. 2 Lns. 65-67) examiner interprets the object of providing for plurality of analyses as repeating the price process.

11. Claim sets 6-8,10,11, 12-13, and 14,15,17, 19 are rejected using logic similar to that used to reject claim set 1,2,4,5 (Col. 24 Lns. 16-40) examiner interprets that system limitations of above claims are detailed with the description of computer and internet network.

12. As per claim 18, Messmer and Makivic teach the above limitations of claim 1. Makivic further teaches displaying the bid value associate wit the selected bidder for a given bid. (Makivic Col 17 Lns 40-46, the market module provides functions to examine and price currently traded contracts, using some of the information supplied by the historical calibration module. The results of the analysis can be displayed in graphical as well as tabular fashion and is stored in the database if requested by the user for future reference).

**(10) Response to Argument**

Appellant's arguments filed 03/02/2009 have been fully considered but they are not persuasive.

Appellant argues that:

- A. Pertaining to the 101 rejections. Independent claim 1 recites four different elements that are performed by a computer. The use of the computer imposes meaningful limits on the scope of claim 1.
- B. Pertaining to the 112 rejections. Appellant clearly had possession of the method of claims 1-5 being performed by a computer.
- C. As to claim 1, cited art does not teach "a first parameter that is a function of a joint bid distribution and density function related to the joint bid distribution; and
- D. As to claim 1, the cited art does not teach three different elements in an equation for computing bid value being joint bid distribution, density function, and selected bidder's value distribution

Examiner responds that:

- a) Examiner agrees that the recitation of computer performed limitations impose meaningful and statutory

limitations, however examiner does not find support in the specification for the inclusion of a computer performance of the specific limitations of claims 1-5, and has viewed the claims without the computer in the limitations, which makes the claims non-statutory.

- b) Appellant's specification is void of any recitation of a computer. It could be interpreted that the illustration of figure 2 (processor, memory, input device) maybe interpreted as a computer, but examiner notes that it may also be a calculator. As an example, it is clear that a computer contains a processor but it is not clear that a device with a processor is a computer. regardless of this determination and assuming Fig 2 is a computer, examiner finds that Figure 2's illustration along with the remaining specifications, does not provide written support as to the specific steps and limitations being performed by a computer
- c) Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Examiner interprets

that the probability density involves underlying parameter values in its determination.

- d) Makivic discloses the uses of historical data to form a probability density in determining an option price (see Makivic Col 25 Lns. 21-25). Makivic further discloses deriving a price sensitivity parameter and solving a simulation to compute an option price (Makivic Col 25 Lns. 4-15). Examiner interprets the probability density, its underlying parameters, and the price sensitivity parameter as the respective 3 equation elements.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/C. Onyezia/

Examiner, Art Unit 3691

Conferees:

/Alexander Kalinowski/

Supervisory Patent Examiner, Art Unit 3691

Vincent Millin /vm/

Appeals Conference Specialist